

**PIKES PEAK  
RADIO AMATEUR  
ASSOCIATION  
(PPRAA)**

**Activities/Meetings**

- Ham Breakfast  
Sheldon's Luncheonette  
Oct 4th, 2014  
Any time between  
8:00 AM and 9:30 AM
- PPRAA Board Mtg  
Mon, September 8th  
Daniel's Taco
- PPRAA Membership Mtg  
Wed. September 10th  
IHOP 5749 Stetson Hills  
Bvd
- 10 Meter/2 Meter net  
Every Thursday 7:00 pm  
28.290 MHz—USB  
144.200 MHz-USB

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**Volume 64 Issue 10**

**October 2014**

# Ø-BEAT

## Mt Herman: SOTA plus VHF Contest

The [North America SOTA Weekend](#) coincided with the [ARRL September VHF Contest](#), which I interpreted as a great opportunity to do a combination SOTA activation and QRP VHF operation. A few other folks thought that was a good idea so we all got on the air from SOTA peaks on the Sunday of the weekend. I decided to operate from Mount Herman ([W0C/FR-063](#)) in grid DM79. I hiked up the same mountain for [last year's September contest](#) and got soaked by the rain. Fortunately, the weather was excellent this year, making it a great day.



View from the south side of Mount Herman

For radio equipment, I took a couple of HTs for 2m and 70 cm FM and the FT-817 for CW/SSB on 6m, 2m and 70 cm. Most of the SOTA action would be on 2m FM but SSB is critical for working the VHF contest. I did put out the word to the usual VHF testers that there would be FM activity and did work a few of them via 2m FM. The 2m FM calling frequency, 146.52 MHz, is commonly used for SOTA but is not allowed for contest use. (Another example of how this rule is just a barrier to contest activity.) We used 146.55 MHz for the contest contacts.

I had coordinated with Brad WA6MM who was going to be on Grays Peak ([W0C/FR-002](#)), one of the Colorado 14ers. When he made the summit, I had my 2m yagi antenna pointed in his direction and easily worked him on 2m FM at a distance of 65 miles.

Continued on Page 7



PPRAA special event operation.

## PPRAA Officers and Board of Directors

PPRAA Board of Directors consists of four elected officers, seven board members, as well the past president (time limit dependent). The Ø-Beat editor is a board appointed position and is also a member of the board.

Officers include:

- ⇒ President
- ⇒ Vice-President
- ⇒ Secretary
- ⇒ Treasurer

To send board member's email, browse to the officers section of our website: <http://ppraa.org/about-ppraa/officers>

President	Michael Derbort	KCØELG
Vide-President	Jim Bishop	KDØKQL
Secretary	John Wishart	NGØI
Treasurer	Pam Scott	WØPRS
Board Member	Doug Nielsen	N7LEM
Board Member	Tom Brereton	WØTOM
Board Member	Jim Rader	KDØNQM
Board Member	Diana Nordstrom	KCØNPP
Board Member	Jim Harris	WØEM
Board Member	Virgil Yost	NØXRS
Board Member	<Open>	
Ø-Beat Editor	Dan Scott	WØRO

## Online Resources

### PPRAA Website

<http://ppraa.org>

The PPRAA website is the cornerstone for club related information, events, and technical information.

In addition you can register, pay dues, and submit donations. Donations to the PPRAA college scholarship fund are managed by FAR Scholarship Committee

### Facebook / Google+

Follow activities as they unfold, or get reminders of upcoming events.

Links to both Facebook and Google+ social media sites can be found on the PPRAA.org.

Or from each social media site search on: Pikes Peak Radio Amateur Association

### PPRAA Forums

The PPRAA forums are intended to allow users to exchange of ideas, ask and answer amateur radio related questions, and plan/discuss upcoming events.

This is a fantastic, but underutilized, tool.

Check it out and register at: [PPRAA.Forumotion.net](http://PPRAA.Forumotion.net)

## Monthly Activities

### Membership Meeting

Held the 2nd Wednesday of the month starting at 7:00.

IHOP  
5749 Stetson Hills Blvd  
(Just west of Powers Blvd)

Next meeting is  
September 10th 7 pm

NOTE: Many show up at 6 pm for kibitzing and grub.

### Board Meeting

Daniel's Taco Shop  
6:30pm—8:00pm  
On the Monday preceding the membership meeting.  
The location is:  
6817 Space Village Ave  
(Just outside the north gate of Peterson AFB)  
Board Meetings are open to all members.

### Ham Breakfast

Location changes monthly:  
Saturday, Oct 4., 8-10AM at Sheldon's Luncheonette, off N. Nevada, (just N of the dog track). Show up anytime between 8:00-9:30 AM

### 10 Meter/2 Meter Net

Every Thursday at 7pm  
Starts on 28.390 USB then transitions to 2 Meter SSB at 144.200 USB.

## Meeting Presentation Topics

### Last Meeting

Public Information Officer (PIO) for ARES Region 2 District 2, Colorado ARES will be the September speaker.

John Bloodgood spoke about station grounding & bonding systems.

### October 8th

PPRAA Elections

### November 12th

To be announced

## COQP

The 2014 Colorado QSO Party is over.

Many logs have been received.

To check if your log was successfully received, browse to:

<http://ppraa.org/coqp/logs13>

See our web site at <http://ppraa.org/coqp> for additional information.

## PPRAA Club Station

To getting the club station to the next level three committees were formed.

1. Antenna committee with Jim Harris, W0EM, as the chairman.
2. Building committee with Jim Bishop, KD0KQL, as the chairman.
3. Electrical committee with Doug Nielsen, N7LEM, as the chairman.

If you would like to be included on a committee please contact one of these committee chairman or send an email to:

[trailer@ppraa.org](mailto:trailer@ppraa.org)

## Zero Beat

If you have a short article, or some amateur radio related information, please forward it to [ZeroBeat@ppraa.org](mailto:ZeroBeat@ppraa.org).

I hope people are enjoying reading the ØBeat! It does take a bit of effort to put together. The more articles that I get the easier it is to publish.

I am looking for pictures related to Pikes Peak, including pictures of Pikes Peak, related pictures including wildlife, flora or Pikes Peak related activities.

When emailing articles or pictures, please include "[ØBeat]" in the email description. I just makes it easier for me.



PPRAA Jamboree on the Air  
Oct 2013



## PPRAA Board Meeting Minutes—8 September 2014

Present: Michael Derbort, Pam & Dan Scott, Virgil Yost, Jim Bishop, Diana Nordstrom, Jim Rader, Jim Harris, John Wishart, Doug Nielsen, John Bloodgood, Chris Schroeder, Les Borst, Dan Martin.

President Michael Derbort called the meeting to order at 6:30PM at Daniel's Taco Shop Restaurant.

August board meeting minutes were approved as published.

### 2014 Goals & Objectives - no changes in G&O

1. New Leadership
2. Financials
  - ◆ Members - 20 more paying members is our goal (150 total)
  - ◆ Megafest - \$2500 profit is our goal.
3. Club Station - goal: at least one operating position and the building completed.
4. Special Events
  - ◆ Special events station for the 100th anniversary of ARRL at the Megafest operating as WIAW/0. We would also like to have another special events station on July 12-13.
  - ◆ 75 yrs of service for our club
  - ◆ Scouting event -

### Committee Reports

*Treasurer's Report* - Pam reported that we have a bank balance of \$14,707.25 as of 31 August 2014.

*Megafest report* - financials were final, with bill from the school coming in a less than expected. Net income: \$2813 = \$6679 income - 3866.96 expenses  
*Scholarship* - we have met the \$1000 goal for this year.

### Antenna Committee -

*Antenna Committee Report:* Jim Harris provided a comprehensive antenna plan for review.

*Building Committee* - Jim Bishop reported that RR ties and concrete blocks have been procured and delivered to the site.

*Electrical Committee* - Doug - no progress yet.

Land Use Agreement - not yet signed. Will also present an antenna plan for approval by the landowner. Would like to extend the agreement to five years.

*Field Day 2015* - Chris proposed getting 8 banners and 11 signs for the club to display at FD and other events. It would run about \$500 for this package from Vistaprint. The board felt that we didn't need that many banners, but the signs would be considered for Megafest. Please submit via email suggestions for signs to Chris.

### Elections

Will be held during October.

### Upcoming Events

Ham Breakfast - 1st Sat in October (the 4th) at 8AM

Next Board Meeting: Monday, October 6, at Daniel's Taco Shop.

Ham Breakfast - Sheldon's Luncheonette on N. Nevada

### Around The Table

*Les Borst* - looking to retrieve his gin pole. He has lost track of it.

*Virgil* - would like to consolidate all of the club's assets. Hard to keep track of all our equipment.

*Dan* - needs articles for Zero Beat.

*Doug* - receiving logs for COQP (over 90 so far).

*Chris* - available for weather merit badge.

*Jim Bishop* - ARES training on software was tonight.

*John Bloodgood* - NTS is being revamped.

*Pam Scott* - Library 21C may be available for meeting rooms.

Meeting was adjourned at 8:13 PM.

Respectfully Submitted,

John Wishart NG0I

Secretary

21 September 2014

## PPRAA General Meeting Minutes—10 September 2014

President Michael Derbort called the PPRAA general meeting to order at 7:00 PM at IHOP Restaurant at 5749 Stetson Hills Blvd., Colorado Springs, CO.

**Silent Keys** – none.

August minutes were approved as published.

### 2014 Goals and Objectives

- no changes

- ◆ **New leadership**
- ◆ **Financials** - Add 20 new paying members, make \$2500 on Megafest
- ◆ **Club station** - at least one operating position permanently online, trailer completed
- ◆ **Special Events**
  - ◇ - 75 years of service by our club - July 12-13 at our club station
  - ◇ - Scouting event - date is TBD

### Committee Reports

*Treasurer's Report* - Pam stated we had \$14,707.25 in our bank accounts as of 31 August 2014.

We have raised the necessary \$1000 for the scholarship the upcoming school year.

*Field Day* - Chris reported that plans are in the works for 2015.

*Assets* - Virgil - nothing to report.

*Club Station* - Jim reported on the antenna committee activities. They have put together a document outlining a proposal for antenna installations.

*Building* - Jim Bishop noted that he has recruited more participants. RR tires and cement blocks have been procured and are awaiting installation. Carpet tiles have been installed in the trailer.

*Electrical* - Doug reported that they have been planning for electrical and solar panel installation.

*COQP* - Doug also noted they have received more than 100 logs from out-of-state and internationally. Band conditions were difficult for many during the contest period.

*ARES* - Jim Bishop commented on the upcoming Tour de Cure bicycle event on Sept 27.

*FEMA Courses* - Chris Schroeder reported that his organization will be teaching FEMA 100, 200, 700, & 800 courses in 2015. They will also be teaching courses on Winter Preparedness and Go Bags.

*Scholarship Fund* - \$1000 goal for upcoming school year has been met. Starting on the 2016 year funding goal.

*Elections* - will be held in October. If you wish to participate on the board or by being an officer, contact a board member or club officer.

### Program

John Bloodgood spoke about station grounding & bonding systems.

### Upcoming Events / Notices

*Ham Breakfast* - Saturday, Oct 4., 8-10AM at Sheldon's Luncheonette, off N. Nevada, just North of the dog track.

*Thursday Night Net*: On the air every Thursday, 7PM, at 28.390 MHz (USB, 10 meter band, vertically polarized). The next net is #302.

*Christmas Party* - Will vote on location for the event at our next meeting.

*Next Meeting*: 7PM, Wednesday, October 10 2014, IHOP Restaurant, Stetson Hills Blvd. & Powers. (2nd Wed of the month)

*Next Board Meeting*: 6:30PM, Monday, 8 October 2014, Daniel's Taco Shop. (Monday before the 2nd Wed of the month)

### Respectfully Submitted,

John Wishart NG0I

Secretary

22 September 2014





## TUNING AN ANTENNA



ISOTRON 20/15/10

ISOTRON 80/40  
GET READY FOR THE FALL  
HF SEASON

<http://www.isotronantennas.com/>

### AM OPERATION

Last month was about using the correct mode to check SWR. One of the modes discussed was AM Modulation. What is this modulation?

AM stands for Amplitude Modulation. It is the most basic and oldest voice modulation we have. How is it produced in the transmitted?

You start with a carrier. This is a constant radio frequency signal. Let's use 7.200 Mhz's. You have an oscillating circuit that produces this constant frequency. Sending this out on the air, you will detect a signal from your radio, but if you are listening on the AM mode you will hear nothing. Even the noise will go away if the signal is strong enough.

However, we want human speech to be sent on this signal. We can do this, and this is why we call it a "carrier". This is the media that delivers the voice from your radio to the next.

In the radio, you mix the voice signal from a basic audio amplifier with the Carrier. The circuit for this is called a "mixer". Both of these signals are fed into one amplifying device. What you get out is an Amplitude Modulated signal. It is fairly simple, but what does the AM signal consist of?



You put 2 signals together, RF carrier and Audio, you will get 3 signals out.

### ISOTRON 20

You still have the RF carrier (7.200 Mhz), however when it was mixed with audio, it developed 2 other signals. These are called Side Bands.

Your Audio signal, for example has a frequency of 1,000 Hz.

This will vary with your voice, but let's keep it constant for now. We can hear this tone. When it is mixed with the RF Carrier, the result is another signal that is the sum of the 2 frequencies.  $7.200 \text{ Mhz} + 1,000 \text{ Hz}$ . This is called an Upper Side Band, USB.

If you raise the audio frequency the Upper Side Band will increase in frequency and vice versa.

The other signal is the difference or subtraction of the signal. Or  $7.200 \text{ Mhz} - 1,000 \text{ Hz}$ . This is called the Lower Side Band. This signal is interesting. It works backwards. If you raise the audio signal, the Radio Frequency gets lower and vice versa. The Lower Side Band has been used for encryption in the past. Therefore, when your voice frequency goes up, the signal frequency goes down.

Enough for now. Next article will address another characteristic of AM and how we receive it.

73,  
Ralph WD0EJA

OCTOBER 2014

## W1AW Centennial QSO Party—QSLs

If you have worked one or more of the W1AW portable station of W1ØØAW, be aware that QSLing may take a few months. Because you may work many of the W1AW stations you might want to hold-off on sending QSLs. If you want to send cards direct, you may include 5 cards and an SASE in one envelope for one unit of postage in the U.S.

Please indicate on the outside of the envelope which portable operation you are QSL'ing (Example: "ATTN-W1AW/6—California"). If you are QSL'ing several portable operations in a single envelope, write "W1AW portable operations—multiple".

See: [www.arrl.org/centennial-qso-party](http://www.arrl.org/centennial-qso-party) for more information.

## Mt Herman: SOTA plus VHF Contest—continued from page 1



Brad was using an HT with a 1/2-wave vertical antenna. Also, I worked Stu WØSTU and Dan NØOLD on Bald Mountain ([W0C/FR-093](#)), which sits on the east side of I-25 right at Monument Hill. Contest activity was light, as usual for the September contest in Colorado. We did have two rover stations that activated a few of the unpopulated grids in eastern Colorado: George ABØYM and Jonesy W3DHJ.

My contest score was not bad for a few hours of operating QRP portable. It turns out that I had set the Colorado section record for “single-op portable” back in 1990 with just 624 points (using my old callsign KBØCY). Oddly enough, 24 years later it appears that I set a new record. (This speaks more to the lack of QRP activity during the September contest and less about my incredible operating ability.)

Band	QSOs	X pt =	QSO pts	X Grids =	Points
50	8	1	8	5	40
144	23	1	23	5	115
432	14	2	28	3	84
Totals	45		59	13	767

All in all, it was a great day in the mountains to take a hike and play with radios. I will probably do the SOTA + VHF Contest activation again.

73, Bob KØNR

*Bob is a longtime member of PPRAA. He posts many interesting articles to his popular blog “[The KØNR Radio Site](#)” which this article is one of many. Articles are re-posted to the ØBeat with Bob’s permissions.*

## Band Plan Frequency Limits—by Stu Turner

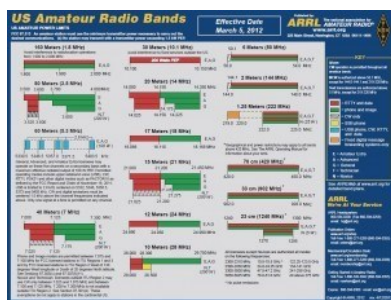
The following is taken from [www.HamRadioSchool.Com](http://www.HamRadioSchool.Com).

G1A09 from the General License Course Section 1.1, Bands & Privileges:

**Which of the following frequencies is within the General Class portion of the 80 meter band?**

- A. 1855 kHz
- B. 2560 kHz
- C. 3560 kHz
- D. 3650 kHz

Stepping up to the General Class license really opens up the HF amateur bands to your utilization. Phone privileges are expanded significantly on 10, 12, 15, 17, 20, 40, 60, 80, and 160 meter bands. Digital or data mode transmissions are also



expanded across the HF range.

The upshot of this expansion of privileges for the aspiring General Class upgrading ham is a larger set of band limits and sub-band limits to know and comply with, and of course to be tested on! With the exceptions of the 30 meter band that allows only digital or data transmissions across its entire width, and the 60 meter band that provides just 5 channels, each HF band has a sub-band for phone mode transmissions and a sub-band for digital and data transmissions. Further, the General Class sub-bands are unique from the (grandfathered) Advanced Class sub-bands or the Extra Class sub-bands in four of the eight HF bands in which both phone and digital/data are allowed.

Several questions from sub-element G1A require you to identify the correct frequency within the General Class portion of a given band, as in the question above, G1A09. Memorizing all those sub-band limits can be a meticulous and less-than-thrilling exercise. There is a better way.

Recall from your Technician Class studies the equation for computing wavelength from frequency:

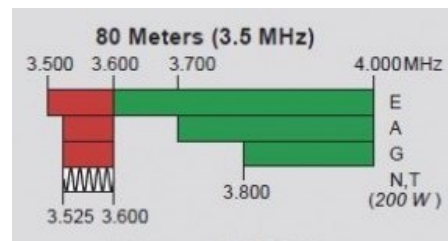
Wavelength (in meters) =  $300 \div \text{Frequency (in MHz)}$

Keep in mind the frequency must be in megahertz, so in a case like G1A09 you must convert the kilohertz values by moving

the decimal three digits to the left. And, remember that the band names are the approximate wavelength in meters. With these handy facts we can compute the wavelength for each of the four response items and see which falls nearest the called out band. In this case, the band is the 80 meter band. Here's how the calculations stack up:

1855 kHz = 1.855 MHz;  $300 \div 1.855 \text{ MHz} = 161.73 \text{ meters}$   
 2560 kHz = 2.560 MHz;  $300 \div 2.560 \text{ MHz} = 117.19 \text{ meters}$   
 3560 kHz = 3.560 MHz;  $300 \div 3.560 \text{ MHz} = 84.27 \text{ meters}$   
 3650 kHz = 3.650 MHz;  $300 \div 3.650 \text{ MHz} = 82.19 \text{ meters}$

Clearly, responses A and B are nowhere near 80 meters. But both C and D are potential 80m bandcandidates for the correct answer. Checking the band plan chart it is easy to see that response D is in



the Extra Class-exclusive phone sub-band, while response C is in the General Class digital/data sub-band.

Great! But no band plan charts are allowed during the exam. So, what's an examinee to do? There is a very simple heuristic that can be used with each item like this in the current (2011 – 2015) General Class question pool. Once you have narrowed the options to two candidates, always select the lower frequency value of the two possibilities. In the example case, the correct response selection is 3560 kHz instead of 3650 kHz. Keep in mind the questions may change after July 1, 2015 such that this little trick no longer works every time.

I don't usually advocate test-taking tricks that obviate real learning. But I have a band plan chart on the wall of my shack, on the shelf next to my transceiver, and in my go box. I also have a very nice app on my phone that provides the band limits. And over time I have mentally absorbed those limits via practical usage. So, in lieu of boring rote memorization, I think using this test-taking trick is just fine.

Other questions in sub-element G1A will challenge your knowledge of the General Class privileges in different ways, so review carefully!

The answer to General Class question **G1A09**, "**Which of the following frequencies is within the General Class portion of the 80 meter band?**" is "**C. 3560 kHz.**"



## CLAN HAM—Geocaching ham group from PPRAA

By: Dan, WØRO

There are many ways to describe geocaching. One explanation is a "high tech treasure hunt where geocachers use billions of dollars of government equipment to find useless junk hidden in Tupperware in the woods." Geocaching is simply using a GPSr to find containers or virtual items placed by another geocacher.

Although the intent of geocaching is not to teach you how to use your GPSr (GPS receiver), a geocacher, over time will use most, if not all, the navigational features their GPSr is capable of. Knowing how to use your GPSr is useful for various amateur radio activities including emergency communications (location and waypoints), mobile operation for your Maidenhead location, and much more. Geocaching provides a fun and interesting method for learning how to use your GPSr.

Over the last month a group of amateur radio operators from PPRAA started to work

together to solve geocaching puzzles and/or go on day long geocaching expeditions. During one such expedition they found over 50 geocaches in one day. Finding the geocache coordinates is not always straight forward, it can involve solving easy to complex math problems, resolving cryptographs, or as easy as reading Morse Code.

Each cacher or caching team creates a unique name so they can log their finds online. The online site tracks various statistics for each cacher's name. These statistics for the basis provides for collecting geocaching bragging rights. To increase the fun for the team of PPRAA geocaching amateur radio operators, they created a superset team called CLAN HAM. The acronym, CLAN, was derived from the first character of the caching names represented by the initial group:

⇒ C4FUN (Christopher, KDØUQI)  
 ⇒ Livesaver50 (Gordon, WØRGD)  
 ⇒ AJ33P (the team of Pam and Dan, WØPRS/WØRO)

⇒ NorthernStorms. (the geocaching team of Diana and Randy KCØNPP/KDØSPP)

Because geocaching expeditions have been requiring two or three vehicles, 2-meter FM simplex has been an ideal method for keeping the group together or discussing the next cache location, ideas for solving a puzzle cache, or discussing the answers needed for logging an earthcache. An earthcache is a virtual cache (no container) based on geology. To log an earthcache answers are sent to the cache owner and if correct you receive permission for logging the find.

CLAN HAM has found just over 100 El Paso County caches in the past month. This represents just a drop in the El Paso County geocaching bucket. World-wide there are currently over 2.5 million active geocaches with over 6 million geocachers trying to find them.

Another activity that is becoming popular, especially in the amateur radio and scouting

community is geofoxing; combining geocaching and fox hunting. A geofoxing event is a course with geocaches and frequency clues for amateur radio direction finding (ARDF).

An excellent article about geofoxing can be found on the [HamRadioSchool.com](http://HamRadioSchool.com) web site.

To find out more about geocaching, the CLAN HAM would be happy to have you join the ranks or tag along. You can visit the primary geocaching site at [geocaching.com](http://geocaching.com) or check with Cheyenne Mountain State park for an upcoming classes.

73, Dan, WØRO.



## October Contest Corner

The follow is a select list from <http://www.hornucopia.com/>.

There are many more contests available on the site. I find the 8-day contest calendar useful. Thirty minutes, an hour or the full contest time is a great way to perfect a new operating mode, digital setup, or completely loose yourself if it becomes addicting.

Links to rules, where to submit logs, and other contest specific information can be found on this site.

Selected contests from 8-Day Calendar that can be found at: <http://www.hornucopia.com/contestcal/contestcal.html>

Date	Contest	Time
Oct-4/5	Oceania DX—phone	0800Z(4th)-0800Z(5th)
Oct-4/5	Russian WW Digital	1200Z(4th)-1159Z(5th)
Oct-4/5	California QSO Party	1600Z(4th)-2400Z(5th)
Oct-4/5	New Jersey QSO Party	1600Z(4th)-0359Z(5th)
		1400Z-2000Z(5th)
Oct-11/12	ARRL EME	0000Z(11th)-2359Z(12th)
Oct-11/12	Pennsylvania QSP Party	1600Z(11th)-2200Z(12th)
Oct-11/12	Arizona QSO Party	1600Z((11th)-0600Z(12th)
		1400Z-2359Z(12th)
Oct-18/19	10-10 Int. Fall—CW	0001Z(18th)-2359Z(19th)
Oct-18/19	New York QSP Party	1400Z(18th)-0200Z(19th)
Oct-18/19	Worked All Germany	1500Z(18th)-1459Z(19th)
Oct-19/20	Illinois QSO Party	1700Z(19th)-0100Z(20th)
Oct-25/26	CQ VVW SSB	0000Z(25th)-2400Z(26th)



## VE Testing Colorado Springs (PPRAA)

Pikes Peak Radio Amateur Association (PPRAA)

When:  
Feb, Apr, Jun, Aug, Oct, Dec  
2nd Saturday at 9 AM

Location:  
Colorado Technical University (CTU)  
4435 North Chestnut  
Colorado Springs, CO 80907

Directions:  
<http://ppraa.org/ve-testing>  
or contact:  
Dan Martin  
[VE@PPRAA.org](mailto:VE@PPRAA.org)



## VE Testing Woodland Park (MARC)

MOUNTAIN AMATEUR RADIO CLUB (MARC)

When:  
Jan, Mar, May, Jul, Sep, Nov  
1st Saturday at 10 AM

Location:  
Woodland Park  
Woodland Park Library-  
Community Meeting RM  
218 East Midland Avenue

Directions:  
<http://www.nx0g.org/ve.html>  
or contact  
Wes Wilson (KØHBZ)  
[k0hbz@arrrl.net](mailto:k0hbz@arrrl.net)  
Call (719) 687-8758



## Applicants will need the following items:

1. A valid PHOTO ID, driver's license preferred (if you do not have a valid photo ID, please call for alternative identification requirements).
2. Your FRN or SOCIAL SECURITY NUMBER (now required – this includes children).
3. Your CURRENT ORIGINAL amateur radio license (if any) and a PHOTOCOPY for the VE Team to keep.
4. The CURRENT ORIGINAL CSEs you have and a PHOTOCOPY for the VE Team to keep.
5. Cash, Check or Money Order for \$15 (standard ARRL VE Fee). Checks and money orders should be made out to ARRL. This covers all exams you wish to take at this VE session.

NOTE: PPRAA and MARC VE Team policy, as with many VE

Teams, is to not allow same day retests on failed exams.

### PPRAA – Colorado Springs testing only:

Anyone passing their Technician Class examination at a PPRAA test session will receive a free year's membership to the Pikes Peak Radio Amateur Association

This page intentionally left blank. Please help  
fill all 12 pages by sending articles or pictures

to:  
zerobeat@ppraa.org.

On the subject line please include “[0beat]”.  
Example: [0Beat] New antenna install

**PIKES PEAK RADIO  
AMATEUR  
ASSOCIATION**

Send membership application to:

Pikes Peak Radio Amateur  
Association, Inc.  
P.O. Box 16521  
Colorado Springs, CO 80935

**General Questions:**  
ppraa@ppraa.org

**ØBeat:**  
zerobeat@ppraa.org



**ppraa.org**

**Get Radio Active, get on the air!**

## Membership Application:

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ New Membership: Yes / No

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Call: \_\_\_\_\_ Class: \_\_\_\_ Phone # (\_\_\_\_) \_\_\_\_\_

Email: \_\_\_\_\_

Are you a ARRL member: Yes / No

Additional Family Members:

Name1: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_ ARRL Member: Yes / No

Name2: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_ ARRL Member: Yes / No

Name3: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_ ARRL Member: Yes / No

\_\_\_\_ \$15.00 Full Member

\_\_\_\_ \$10.00 Full Member over 65

\_\_\_\_ \$18.00 Family Membership

\_\_\_\_ \$12.00 Family Membership over 65

\$\_\_\_\_ Membership Amount

\$\_\_\_\_ Scholarship Fund Donation

\$\_\_\_\_ PPRAA General Fund Donation

\$\_\_\_\_ Total

## 2015 Scholarship Fund

There are multiple ways to donate to the PPRAA

Scholarship Fund.

1. Use the form found on this page and send it, along with a check to PPRAA.
2. On the PPRAA web site you can donate via PayPal
3. At club meetings
4. Directly to the our scholarship fund.

Make checks to:  
PPRAA Scholarship

The scholarship fund can be reached at:

FAR Scholarship Committee  
P.O. Box 911  
Columbia, MD 21044

## Ø- Beat Banner

Photo by Dan—WØRO

The Ø-Beat banner picture was taken of Pikes Peak near Fountain, CO.

The theme of the banner is Pikes Peak. If you would like to submit pictures for the Ø-Beat banner, please send them to:  
zerobeat@ppraa.org

Please Include "[0-beat]" as part of the subject line.